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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/809,468 | 03/26/2004 | Hidefumi Sakata | 119301 | 7646 |
| 25944 | 7590 | 04/12/2006 | EXAMINER | |
| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | SEVER, ANDREW T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2851 | |

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/809,468

Applicant(s)

SAKATA, HIDEFUMI

Examiner

Andrew T. Sever

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 1-11, 17, 18 and 23-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-16 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 1-11, 17, 18, and 23-26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 8/12/2005.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 12-16 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roddy et al. (US 6,762,785 as cited in the previous office action) in view of Sato et al. (US 5,042,921.)

Roddy teaches in figure 6 a lighting device comprising:

A light source device that includes first (12bg) and second light sources (12g) that emit first and second illumination lights, respectively, each of which has a peak

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wavelength different from each other (see figure 2 which teaches the wavelengths of the various light sources, the 12bg source is at 488nm while the green emitter is at 514nm);

A wave combining unit (19) that combines the first and the second illumination lights when the first and the second illumination lights are incident on the wave combining unit, and emits illumination lights combined; and

A polarization converter (17) that converts the second illumination light to a linearly polarized light in a predetermined direction to allow it to enter the wave-combining unit.

Roddy does not teach what form the polarization converter takes. Sato teaches in figure 5 a polarization converter (108 and 109), which comprises of a quarter wave plate (109) facing a light source (104) and a reflection-type polarizing plate (the selective polarization reflective part of 108). Sato teaches in column 6 lines 49-52 that such a polarization converter results in almost no waste light compared to other prior art polarization converters. Accordingly since such a polarization converter as that of Sato is taught to be more efficient resulting in brighter images, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilized the polarization converter of Sato in the light device of Roddy, wherein it would be obvious from the functionality of the polarization converter of Sato and disposition of the polarization converter of Roddy that the reflection-type polarizing plate would face the wave combining unit in the polarization converter of Roddy in view of Sato.

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With regards to applicant's claims 13-15:

The wave-combining unit 19 is a dichroic mirror, which is a combining element that transmits and reflects light wherein the wavelength 514nm is reflected while the wavelength 488nm is transmitted. Inherently these two wavelengths must be within the difference generation range for their respective reflection or transmission.

With regards to applicant's claim 16:

The first and second light sources are solid-state light sources (LEDs see column 7 line 16.)

With regards to applicant's claim 19:

The first and second illumination lights correspond to green light.

With regards to applicant's claims 20:

Although Roddy is specifically a printer for printing on photosensitive material, the structure of Roddy is that of a projector and an optical type printer as taught by Roddy, can be considered to be a type of projector. Part 110 is a projection lens; part 32 is a light modulator. See above for the other claim limitations.

With regards to applicant's claim 21:

12B and 12R are third and forth-light sources belong to blue and red colors of light respectively.

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With regard to applicant's claim 22:

The modulator is specified in column 8 lines 20-38.

Response to Arguments

4. Applicant's arguments with respect to claims 12-16 and 19-22 have been considered but are moot in view of the new ground(s) of rejection.

The Roddy reference has been combined with the Sato reference to teach all of applicant's claimed subject matter.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 5,452,128 to Kimura teaches other polarization device arrangements.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS



William Perkey
Primary Examiner